



Benha University  
Faculty of Veterinary Medicine

## **Course Specifications**

### **SYSTEMIC BACTERIOLOGY**

- **Program on which the course is given:** Bachelor of Veterinary Medical sciences
- **Department offering the course:** Bacteriology, Immunology and Mycology
- **Academic year / Level:** 3<sup>rd</sup> Year, 2<sup>nd</sup> semester

#### **A- Basic Information**

**Title:** Systemic Bacteriology.                      **Code:** Vet 00632a  
**Lecture:** 2 hours/ week  
**Practical:** 3 hours/ week  
**Total:** 5 hours

#### **B- Professional Information**

##### **1 – Overall Aims of Course:**

- Provide all the needed information on bacteria as causative agents of animal diseases, toxicity and/or allergy.
- Provide skills for accurate diagnosis of bacterial infections.
- Give recent information on the recent techniques used in the diagnosis of microbial infections and to familiarize students with basic principals of molecular biology and biotechnology methods.

##### **2 – Intended Learning Outcomes of Course (ILOs)**

###### **a-Knowledge and Understanding:**

**By the end of this course, students will be able to:**

After successful completion of the course the students should be able to:

- a1- Define and classify bacteria involved in causing diseases and important infections.
- a2- Tabulate and classify bacteria causing economic losses in farm animals.
- a3- Describe host- parasite relationship and microbial pathogenesis.
- a4- Mention different measures of prevention and control including chemotherapeutic agents as well as treatment and vaccination of bacterial and fungal pathogens.

## **b- Intellectual Skills**

**By the end of this course, students will be able to:**

- b1- Illustrate a systematic approach for laboratory diagnosis of common infections and clinical conditions and select the most appropriate and cost-effective tool leading to the identification of the causative agent.
- b2- Interpret results of microbiological, serological and molecular tests.
- b3- Use the scientific approach for prevention , control and suggestion of treatment for microbial infections.

## **c- Professional and Practical Skills**

**By the end of this course, students will be able to:**

- c1- Practice on sample collection for isolation of bacteria and fungi.
- c2- Choose suitable media for trials of isolation of different organisms.
- c3- Use the equipments and chemicals in the microbiology laboratory.
- c4- Perform different methods for identification of bacteria and fungi.
- c5- Solve problems during isolation.
- C6- Apply recent techniques used for identification of bacteria and fungi.

## **d-General and Transferable Skills**

**On successful completion of this course, students will be able to:**

- d1- Using power point presentation in seminars.
- d2- Using internet for getting more information.
- d3- Communicate with others for improving quality of learning.
- d4- Retrieve information from different sources independently.
- d5- Coordinate for conference, workshop.

### 3- Contents

Topic	No. of hours	Lecture	Practical
Different Bacteria of Medical Importance	30	30	-
Methods for diagnosis of bacterial and fungal diseases and different techniques for isolation and identification.		-	45
<b>Total</b>	<b>75</b>	<b>30</b>	<b>45</b>

### 4- content-ILOs matrix

	Content	ILOs			
		Knowledge and understanding	Intellectual	Professional and practical	General and transferable
1.	Different Bacteria of Medical Importance	a1, a2,a3, a4	b1, b2, b3	C1, c2, c3, c4, c5, c6	d1, d2,d3, d4
2.	Methods for diagnosis of bacterial and fungal diseases and different techniques for isolation and identification.	a1,a2,a3,a4	b1, b2, b3	C1, c2, c3, c4, c5, c6	d1, d2,d3,d4,d5

### 5- Assessment-ILOS matrix

Assessment	ILOs			
	Knowledge and understanding	Intellectual	Professional and practical	General and transferable
Mid – Term exam	a2, a3, a4	b1, b2		
Practical exam	a1	b1, b2,b3,	c1, c2 , c3, c4, c5	
Oral exam	a1, a2, a3, a4, a5	b1, b2,b3		
Final term exam	a2, a3, a4	b1, b2,b3,	c1, c2 , c3	
Assignments and research	a4	b1		d1, d2, d3,d4, d5

## 6- Teaching and Learning Methods

- 4.1- Lecture notes and textbooks
- 4.2- Lectures prepared on multimedia as PowerPoint presentations.
- 4.3- Training and for all laboratory tools and equipments.

## 7- Student Assessment Methods

- 5.1 Mid-term examination
- 5.2 Final-term exam
- 5.3 Oral exam
- 5.4 Practical exam
- 5.5 Assignment and research

### Assessment Schedule

Assessment 1: Mid-term exam	Week 8
Assessment 1: Final-term exam	Week 15
Assessment 2: Oral exam.	Week 15
Assessment 3: Practical exam.	Week 14
Assessment 4: assignment and research	Monthly

### Weighting of Assessments

Mid-term examination	5%
Final-term Examination	50 %
Oral Examination.	20 %
Practical Examination	20 %
<u>Assignment and research</u>	<u>5 %</u>
Total	100%

## 8- List of References

### 8.1- Course Notes

General bacteriology, Immunology and Mycology: summarized integrated course for 3<sup>rd</sup> grade students.

### 8.2- Essential Books (Text Books)

- Cruickshank, Mermion and Swain. Medical Microbiology. Vol. I & II.
- Merchant and Packer. Veterinary Bacteriology and Virology.
- Topley and Wilson. Textbook of Microbiology and Microbial infections.
- Wight, Hirsh, Maclachlan and Walker. Veterinary Microbiology.
- Quinn, Carter, Carter and Markey. Clinical Veterinary Microbiology.

### 8.3- Periodicals, Web Sites, ... etc

*Periodicals:*

- Journal of Veterinary Microbiology.

*Web sites:*

- . [http://www.microbe.org/microbes/virus\\_or\\_bacterium.asp](http://www.microbe.org/microbes/virus_or_bacterium.asp)
- . <http://www.bact.wisc.edu/Bact330/330Lecturetopics>
- . <http://www.microbelibrary.org/>
- . <http://www.mic.ki.se/Diseases/c2.html>

### 9- Facilities Required for Teaching and Learning

- A laboratory of microbiology.
- Multimedia projector, CDs and a computer.
- Instruments and media for bacteriological isolation and identification.

#### Course Coordinators:

Prof. Dr. Adel M. Ad El-Megeed Khalid

Prof. Dr. Ashraf Awad Abd El-Tawab

Department head:      Signature: .....

Date: 09-01-2011